

## **ABSTRACT**

A non-circular-orbit detection method and apparatus is disclosed. In some embodiments, the method includes: locating first and second detectors, displaced with respect to one another, a distance from a patient; moving the first and second detectors in a direction towards the patient until a first sensor senses a first point of the patient at a first sensing position; moving the first and second detectors in a second direction from the first sensing position until a second sensor senses a second point of the patient at a second sensing position; and moving the first and second detectors in a non-circular-orbit around the patient. Preferably, the method includes determining the non-circular-orbit based on, among other things, locations of the first point and the second point.